

**WHAT IS CLAIMED IS:**

1           1.     A method for switching between two different network access  
2 technologies on a networked hardware platform without interrupting an active  
3 network application, the networked hardware platform sending and receiving  
4 information in a data packet form, said method comprising the steps of:

5                 determining an active network adapter by monitoring packet traffic and  
6 hardware status of one or more network adapters available on the networked  
7 hardware platform; and

8                 dynamically engaging the active network adapter by a network access  
9 arbitrator to process at least one data packet,

10                wherein the engagement of the active network adapter is invisible to the  
11 active network application.

1           2.     The method of claim 1 wherein the network access arbitrator  
2 defines a virtual anchor adaptor driver that is known as the only adapter  
3 driver to the network application regardless of the existence of other actual  
4 adapter drivers available in the networked hardware platform.

1           3.     The method of claim 2 further comprising the steps of:  
2                 assigning a predetermined network adapter as a primary network  
3 adapter for providing the network access; and  
4                 initially setting the virtual anchor adaptor driver as the network  
5 adapter driver associated with the primary network adapter.

1           4.     The method of claim 3 further comprising the steps of:  
2           changing a hardware destination address of an incoming data packet to  
3           a data link layer address of the primary network adapter; and  
4           changing a source hardware address of an outgoing data packet to the  
5           data link layer address of the active network adapter.

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5.     A method for switching between two different network access technologies on a networked hardware platform without interrupting an active network application, the platform sending outgoing data packets and receiving incoming data packets for the network application through at least two network adapters, the network adapters providing accesses to the network hardware platform for executing the network application, the method comprising the steps of:  
          providing a network access arbitrator having a virtual anchor adapter driver;  
          assigning a network adapter as a primary network adapter;  
          detecting an active network adapter; and  
          configuring, by the network access arbitrator, the data packets generated by the active network application to continue the network application when the access to the network hardware platform is switched from the primary network adapter to the active network adapter driver, wherein the network application detects only the network arbitrator when accessing the networked hardware platform.

1           6.     The method of claim 5 wherein the step of assigning further  
2 includes the step of initially configuring the virtual anchor adapter driver as  
1 the network adapter driver associated with the primary network adapter.

1           7.     The method of claim 5 wherein the step of configuring further  
2 includes the steps of:  
3           changing a source hardware address of a data packet for the outgoing  
4 information to a data link layer address of the active network adapter; and  
1           modifying a destination hardware address of a data packet for the  
2 incoming information to that of the primary network adapter driver.

1           8.     The method of claim 5 wherein the step of detecting further  
2 includes a step of receiving information from at least one network adapter  
3 about connection or disconnection status of the network adapter and its  
4 adapter driver.

1           9.     The method of claim 8 further comprising the steps of:  
2           providing a timer to trigger a timed event; and  
3           determining whether at least one adapter receives or sends data packets  
4 during two consecutive timed events.

1           10.    The method of claim 5 wherein the step of detecting further  
2 includes the step of detecting whether the primary network adapter is active.

11. A method for switching from a first network access technology to a second network access technology on a networked hardware platform without interrupting an active network application using a network access arbitrator, the active network application sending outgoing information and receiving incoming information in data packets through the networked hardware platform, the first network access technology using a first network adapter driver and the second network access technology using a second network adapter driver, the method comprising the steps of:

utilizing the first network access technology for executing the active network application; and

selecting the second network access technology for continuing the active network application without interrupting the network application through a network access arbitrator by arbitrating between the first network adapter driver and the second network adapter driver for sending the outgoing information and receiving the incoming information.

12. The method of claim 11 wherein the network access arbitrator has a virtual anchor adapter driver that is visible to the active network application.

13. The method of claim 12 wherein the step of utilizing further includes the steps of:

selecting the first network adapter as a primary network adapter; and

configuring the anchor adapter driver to be associated with the first network adapter.

1           14.    The method of claim 11 wherein the step of selecting further  
2 includes the steps of:  
3           detecting when the second network adapter driver is active; and  
4           modifying a source hardware address of a data packet for the outgoing  
5 information to be a data link layer address of the second network adapter  
6 driver; and  
7           modifying a destination hardware address of a data packet for the  
8 incoming information to be a data link layer address of the first network  
9 adapter driver.

1           15.    The method of claim 14 wherein the step of detecting further  
2 includes a step of receiving information from the second network adapter  
3 about connection or disconnection status of the second network adapter.

1           16.    The method of claim 15 wherein the step of receiving further  
2 includes the steps of:  
3           providing a timer to trigger a timed event; and  
4           determining whether the second adapter receives or sends data packets  
5 during two consecutive timed events.

1 17. A system for switching between two different network access  
2 technologies on a networked hardware platform without interrupting an active  
3 network application, the platform sending outgoing data packets and receiving  
4 incoming data packets for the network application through at least two  
5 network adapters, the network adapters providing access to the network  
6 hardware platform for executing the network application, the system  
7 comprising:

8 means for assigning a network adapter as a primary network adapter;

9 means for detecting an active network adapter; and

10 a network access arbitrator having a virtual anchor adapter driver for  
11 configuring the data packets generated by the active network application to  
12 continue the network application when access to the network hardware  
13 platform is switched from the primary network adapter to the active network  
14 adapter driver;

15 wherein the network application detects only the network arbitrator for  
16 accessing the networked hardware platform.

1 18. The system of claim 17 wherein the means for assigning further  
2 includes means for configuring the virtual anchor adapter driver initially as  
1 the network adapter driver associated with the primary network adapter.

1 19. The system of claim 17 wherein the network access arbitrator  
2 further includes:

3 means for changing a source hardware address of a data packet for the  
4 outgoing information to a data link layer address of the active network  
5 adapter; and

6 means for modifying a destination hardware address of a data packet for  
7 the incoming information to that of the primary network adapter driver.

1           20.    The system of claim 17 wherein the means for detecting further  
2 includes a means for receiving information from at least one network adapter  
3 about connection or disconnection status of the network adapter and its  
4 adapter driver.

1           21.    The system of claim 20 further comprising the steps of:  
2 providing a timer to trigger a timed event; and  
3 determining whether at least one adapter receives or sends data packets  
4 during two consecutive timed events.

1           22.    The system of claim 17 wherein the step of detecting further  
2 includes the step of detecting whether the primary network adapter is active.

1           23.    A computer program for switching between two different network  
2 access technologies on a networked hardware platform without interrupting an  
3 active network application, the networked hardware platform sending and  
4 receiving information in a data packet form, said computer program  
5 comprising:

6           instructions for determining an active network adapter by monitoring  
7 packet traffic and hardware status of one or more network adapters available  
8 on the networked hardware platform; and

9           instructions for dynamically engaging the active network adapter by a  
10 network access arbitrator to process at least one data packet,

11          wherein the engagement of the active network adapter is invisible to the  
12 active network application.

1           24.    The program of claim 23 wherein the network access arbitrator  
2 defines a virtual anchor adaptor driver that is known as the only adapter  
3 driver to the network application regardless of the existence of other actual  
4 adapter drivers available in the networked hardware platform.

1           25.    The program of claim 24 further comprises:  
2 instructions for assigning a predetermined network adapter as a  
3 primary network adapter for providing the network access; and  
4 instructions for initially setting the virtual anchor adaptor driver as the  
5 network adapter driver associated with the primary network adapter.

1           26.    The program of claim 25 further comprises:  
2 instructions for changing a hardware destination address of an  
3 incoming data packet to a data link layer address of the primary network  
4 adapter; and  
5 instructions for changing a source hardware address of an outgoing data  
6 packet to a data link layer address of the active network adapter.

